





DESCRIPTIVE STUDY OF A  
MILITARY PAIN CLINIC

Master Thesis

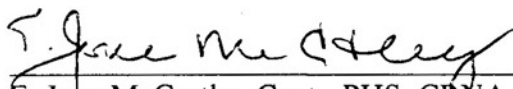
By

Glenae Esther Palmer

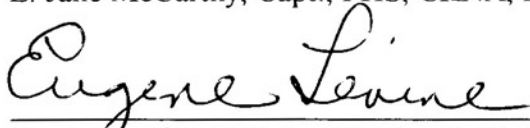
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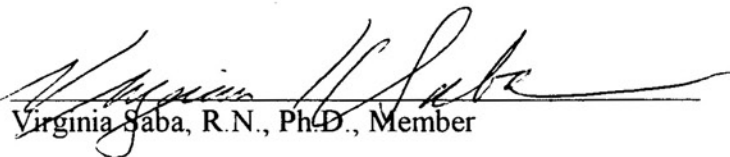
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## ABSTRACT

A minimum data set is a tool for abstracting a uniform collection of essential data elements from a patient record. This type of documentation will aid in cost containment, trending outcomes, stimulation of research, and promoting continuity of care. The purpose of this study is to analyze a sample of new consultation patient records collected over a 14 month period from a military chronic pain clinic. This is accomplished by developing a selected minimum data set and used to collect the data. The methodology includes a retrospective study of 57 chronic pain clinic patient consultation records from a military facility. The study found that the largest percentage of patients who visit the chronic pain clinic are 60-79 years of age and female. The most frequent location of pain was abdominal, axillary/upper arm, and back. The most frequent diagnosis was lower back pain. Treatment modalities included regional blocks, medication, physical therapy, and psychotherapy. The most frequent regional block performed was the lumbar epidural steroid injection. Many pain programs are based on a holistic or somatic model. This military chronic pain clinic is based on the somatic model. Possibilities of future research include the comparison of regional block vs. medication treatment and the role of certified registered nurse anesthetists in a chronic pain clinic.

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by

GLENAE ESTHER PALMER

THESIS

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## CHAPTER ONE

### Introduction

Continuity of care is an essential part of effective and comprehensive patient care that can be fostered by an effective, efficient, and integrated documentation system. With the availability of computers in virtually all areas of patient care, data can be collected across clinical populations, settings, and regions which could be a boon to nursing research and patient care. A collection of data elements from patient records in a military chronic pain clinic, describing its demographics, diagnoses, and pain treatments, is a step toward further research into pain management. Computerized systems are cited as one strategy for coping with the cost and inefficiency of our health care system (Garrett, 1986; McDonald & Tierney, 1988).

### Rationale of Problem

Little data are available on patient treatment provided in military chronic pain clinics. Records of patient consultations are difficult to find and they are often illegible. Records of the most common medical diagnoses, age and sex of patients, types of imaging ordered, or the most common treatments provided are frequently not available. Compiling consultation information, which is part of the patient's permanent record, is time consuming and many entries are difficult to read, lacking in detail, and lost or delayed before returning to the original record. Continuity of care is lacking, time is wasted deciphering or searching for records, communication is broken, and both provider and

patient suffer. In this increasingly technological, cost-saving, and litigious society, concise, accurate, complete, and accessible patient records are essential.

The concept of uniform minimum health data was formulated at a Conference on Hospital Discharge Abstract System in 1967 (National Committee on Vital and Health Statistics [NCVHS], 1980) motivated by increasing health care costs and a need for systematic planning of resources and improvement of the quality of care. The minimum data set (MDS) for ambulatory settings has been implemented in the United States but is not widely used. The MDS is a minimum set of information with uniform definitions that is concerned with a specific aspect of the health care system that meets the needs of multiple data users. The implementation of the MDS should be a major goal of the nursing profession. The advantages are many. They include the ability to prepare legible, uniform records, to evaluate the treatments of clients, and to demonstrate or project trends for planning and management. Additional advantages are improvement of accountability, proper allocation of medical resources, implementation and testing of interventions, and the stimulation of research (Werley, 1988).

### Purpose

The purpose of this study is to analyze a sample of new consultation patient records collected over a 14 month period from a military chronic pain clinic. This was accomplished by developing a selected minimum data set that best describes the patients in a military chronic pain clinic and using it to collect the data. The results, which are presented in graphic and tabular form, can be used as a baseline data set for other military chronic pain clinics.

### Conceptual Framework

This study is a retrospective, descriptive (quantitative) study conducted in a military chronic pain clinic. It describes selected types of information gathered from an initial pain clinic assessment interview of new patients during a 14 month period. These new patients are those referred to this chronic pain clinic, when they have been diagnosed to have chronic pain, that is, pain lasting greater than six months. The data elements selected include demographics, description of pain, diagnostic treatments, medical diagnoses, and treatment of the patients.

The conceptual framework of this study is based on Imogene King's Theory of Goal Attainment (Marriner-Tomey, 1994). King views the nursing profession as a dynamic interacting system and identifies three levels of function: individuals, groups, and society. Each of these components involves human interaction because individuals exchange matter, energy, and information with each other and the environment. Thus, data must be captured and recorded to maintain clear communication among the provider and patient, medical record, and potential researcher. King believes that nursing is an "observable behavior" in the health care system in our society. It is this dynamic communication and transaction that is so unique in patient care that leads to action and goal attainment.

The center of this human interaction is clear communication and understanding among individuals, groups, and society. This interchange between patient and provider begins with the interview. The patient must describe his/her problem clearly and the provider must ask pertinent questions in order to understand completely the patient's condition. This clear communication must be transferred to the medical record and



translated into data elements for the computer record so that it captures the important components of the interaction. When the record is accessed at a later time, the data captured from the interview are then clear to the reader. They can be combined with other computerized medical records to aggregate data from which research can be done. A major goal is to have clear communication between individuals and groups which begins with the human interaction between patient and provider in the initial interview. This can best be accomplished by computerizing a standardized selected minimum data set.

### Definitions

#### Minimum Data Set:

A minimum set of items of information with uniform definitions, concerning a specific aspect of the health care system that would be of benefit to provider and patient (NCVHS, 1981). It is an attempt to standardize the collection, storage, and retrieval of essential, comparable, core data that are used on a regular basis by providers (Leske & Werley, 1992).

#### Chronic Pain Clinic:

A clinical service facility, usually restricted to outpatient services, which specializes in the diagnosis and treatment of chronic pain syndromes (Wu & Grzesiak, 1987). The clinic generally accepts only patients with all types of pain syndromes lasting greater than six months in length. Acute pain is not treated in the chronic pain clinic. It provides a variety of treatment modalities.

The chronic pain clinic in which this study takes place does not offer educational programs on pain management nor does it have facilities or staffing for research and vocational assessment and counseling.

Consultation Record:

A standard form, part of the permanent patient's medical record, which originates from a physician provider outside of the pain clinic (referral source) and includes: (a) date of request, (b) reason for consultation, (c) complaint of patient, (d) provisional diagnosis, (e) place of consultation, (f) patient's identification, and (g) provider's signature. The chronic pain clinic assessment and treatment report is also recorded in detail on this form after the initial assessment visit.

Description of Pain:

Characteristics describing frequency, intensity, and location of pain, such as continuous, with or without crescendo, intermittent, paroxysmal, seasonal (e.g., migraine or allergy). Also any precipitating factors such as emotional factors, dietary, sleep, endocrine function, or weather can be recorded, as well as aggravating factors such as lifting, sneezing, or a spouse's unreasonable demand can exaggerate the pain (Wu, 1987).

Diagnostic Services:

All services provided for the patient's encounter which generally includes imaging tests such as magnetic resonance imaging (MRI), myelogram, computed tomography scan (CT scan), bone scan, and/or radiograph (X-ray).

Pain Management:

The management of the pain or rehabilitation course through medical and/or surgical treatments, or patient counseling and education. This includes modalities such as transcutaneous electrical nerve stimulation, peripheral nerve blocks, heat and massage, and biofeedback.

### Diagnosis:

The determination of the nature of the patient's chronic pain.

### Limitations and Assumptions

The major limitation of this study is the unavailability of all patient consultation records of all new patients seen over a 14 month period. As a result, a number of initial consultation records were lost, patient visits were never recorded, or consultation records never integrated with the patients medical records. Some patients left the area with their medical records making it impossible to track their consultation sheet. As a result, only one anesthesiologist's records were used because of their completeness for this study. However, this researcher considered the anesthesiologist's protocol to be representative of the traditional care or activities conducted in a military chronic pain clinic.

The major assumption made in conducting this study is that inefficiency in the health care delivery system stems from lack of communication among providers using medical records. Consultation interviews, diagnostic tests, and schedule arrangements have to be repeated which contributes to spiraling health costs. It is also assumed that this inefficiency has a negative effect on patient care and satisfaction.

### Summary

The use of computers and MDS in a military chronic pain clinic offers many benefits to medical providers and patients. Computers can provide legible patient medical records, storage and easily retrievable data, ability to evaluate and trend outcomes, and stimulation of research. By selecting a standardized minimum data set, the data elements can be collected and used to analyze this specific military chronic pain clinic.



## CHAPTER TWO

### Review of the Literature

In the first part of this review the theory and role of minimum data sets in the health care system will be discussed. Secondly, the use of computers in various health care settings will be discussed along with the advantages and disadvantages of their introduction. And finally, the importance of accurate pain assessment and treatment are reviewed.

### Minimum Data Set

In August 1974, a group of consultants to the National Committee on Vital and Health Statistics set forth and defined a uniform minimum basic data set (MDS) that should appear in ambulatory medical care records (NCVHS, 1981). Their purpose was to improve quality of medical care regardless of the setting in which it was provided and to reduce the redundant recording and reporting of data by providers. Specification of the data set was based on the components of a medical record that must be present to facilitate quality care and information that can be easily retrieved and analyzed. Existing health data sets include: Uniform Hospital Discharge Data Set (UHDDS), Long-term Health Care Minimum Data Set (Simpson, 1991), and the Uniform Ambulatory Medical Care Minimum Data Set (NCVHS, 1980). Only the UHDDS is widely used because these data must be collected on all hospitalized patients receiving Medicare benefits (Leske & Werley, 1992).

The nursing minimum data set (NMDS), derived from the general concept of the MDS, was developed in 1977 at a Nursing Information Systems Conference (Werley,

Devine, Zorn, Ryan, & Westra, 1991). It was designed to collect uniform, standard, comparable, minimum nursing data from various settings and patient groups that could also be useful to other health professionals. The NMDS includes 16 elements categorized into three general groups: nursing care, client demographics, and service elements. In a pilot test, data pertaining to the availability and reliability of the NMDS elements were collected on 116 patient records (Devine & Werley, 1988). Most of the NMDS elements were available for greater than 90 percent of the cases. Overall intercoder agreement on the data set elements was 91 percent. The benefits and implications of the NMDS are valuable to the nursing profession but nursing has been slow in developing and computerizing nursing information systems. A study by Leske and Werley (1992) indicated that use and implementation of the NMDS is not widespread. Although they felt their findings could not be generalized, they believed the NMDS was being used for educational seminars, as a reference tool, as a guide to developing nursing information systems, and to structure nursing documentation.

Although the advantages and the potential for a powerful computerized information system are obvious, there are some reasons for the lack of widespread adoption of computer use in the workplace. It could be greatly facilitated if the MDS was accepted by the U.S. Department of Health and Human Services and other federal agencies that operate or finance ambulatory medical care programs. Implementation of the MDS would be advanced if federal agencies fostered and promoted its use in health programs such as Medicare, Medicaid, Civilian Health and Medical Program of the Uniformed Services (CHAMPUS), children and youth projects, and Professional Standards Review Organizations.

Another reason for lack of acceptance may be that health care providers perceive the MDS as yet another form to fill out in order to satisfy some external agent (Kane, 1992). When information is primarily collected for regulatory purposes, it heightens the fear that data collected will expose inadequacies that otherwise would remain hidden.

Another impediment to the widespread use of MDS is lack of a standardized language to communicate the treatments performed. McCloskey and Bulechek (1994) explore the arguments for and against using standardized language. They conclude that the development and use of standard language will assist the professional nurse in communication with colleagues throughout the world, to clearly articulate with other health providers, to build large databases, and demonstrate the effectiveness of nursing care.

### Computers in Health Care

The tool that will greatly promote the use of the MDS is the computer. Computers offer many advantages over paper and pencil record keeping. Kane (1992) says that computers are beneficial to the MDS because once data are entered there is no need to re-enter that data by subsequent users. He also states that information from a patient's record may be transmitted to other hospitals while the original record stays in the facility. Other advantages of the computer includes the ability to examine aggregate information which is a powerful tool for clinical and program management. It can be used to group patients by diagnosis or functional category. Computer entry can allow for real time checking to be sure responses are valid. And, finally, the computer can graphically chart progress of individuals or groups of patients which can be an educational and motivational tool for staff.

## Chronic Pain Treatment

Patients with chronic pain represent an individual and societal problem in terms of suffering, impact on families, time lost from employment, medical expenses, and disability compensation. There is considerable agreement in the literature on the requirements for collecting a detailed pain history (Clifford, 1993; Roberts, 1986; Stolker, Vervest, and Groen, 1994; Wu, 1987). There are many treatment approaches for pain, depending not only on the etiology, location, and intensity of the pain, but also on the training and orientation of the person prescribing the treatment (Holzeman & Turk, 1986). Analyzing data on various treatments and their outcomes could impart a wealth of information to providers.

Accurate diagnosis of chronic pain patients involves two separate tasks (Grzesiak & Perrinc, 1987). The first is to evaluate the pain apart from the specific patient, and the second is to assess the unique individual. After evaluation of the pain a detailed history of the patient must be obtained. Turk, Meichenbaum, and Genest (1983) stress the assessment of not only the current situation but the patient's life before the onset of pain, prior experience in coping with pain and stress, problem-solving style, family structure, social support, vocational, and recreational activities. The medical history can give insight into possible causes of the chronic pain. Roberts (1986) discusses the increasing evidence of family members being primary reinforcers of disability. When this behavior is detected, participation of the family in both assessment and treatment of the pain is necessary. Misuse or abuse of medications, alcohol, or recreational drugs frequently contribute to chronic pain disability and must be carefully evaluated in an assessment.

To determine a rational form of treatment, the initial clinical assessment must include a meticulous medical, family, drug and medication, functional, recreational, and social history as well as a complete physical examination (Clifford, 1993; Roberts, 1986; Stolker, et al., 1994; Wu, 1987). Wu (1987) argues that pain assessment should include activity level, severity and characteristic of the pain, precipitating and aggravating factors, and methods used by the patient to reduce pain. Roberts (1986) argues that the assessment should also gather information on how long the pain has persisted, the number of health care professionals previously consulted, the number of hospitalizations, and the particular treatments already administered. Management of chronic pain requires the use of several treatment modalities that broadly include: (a) physical, (b) psychological, (c) pharmacologic, and (d) neurosurgical procedures (Condouris, 1987). This paper is limited to these four treatment modalities.

Condouris states that pharmacologic interpretation of the pain process is based on the knowledge that pain reception, transmission, and perception, involves a series of neural links from the periphery to the central nervous system. It is within these neural links where several chemical neuro-transmitters are located and where drugs with different pharmacologic profiles and mechanisms can interrupt or, at least dampen, the transmission of pain. Since the pathways for perception of pain are complex, it is clear that their very complexity provides numerous sites for pain interruption, hence, allowing several different choices of drugs. These include central and peripheral-acting analgesics, non-narcotic analgesics, nonsteroidal anti-inflammatory drugs (NSAID), tricyclic antidepressants, and muscle relaxants.

The physical treatment modality is grouped under physical therapy. The use of transcutaneous electrical nerve stimulation (TENS) is well recognized for its effectiveness in pain relief (Choi & Tsay, 1987). Specific muscle strengthening exercises are employed when specific muscle weakness is identified. An exercise program generally lasts six to eight weeks and is designed to promote strength, endurance, stretching, posture, and body mechanics. This provides enough time to evaluate a patient, prescribe a program and reinforce significant progress. Vapocoolant sprays are one way of applying cold treatment.

The psychological treatment modality focuses on ways in which learning or conditioning influences pain behavior (Wolskee, 1987). Its purpose is to develop operant pain behaviors while considering the history and environment in which the patient lives. The goal of treatment is to decrease behaviors that are causing poor adjustment for the patient, increase the patient's physical and social activities, return the patient to work if not working, and reduce or eliminate the intake of medication. Biofeedback informs the patient about some unconscious bodily function with the use of a device so that the patient learns to control the physiological response. Through training, he or she is able to bring under voluntary control a response of increased pain control, relaxation, or pain relief. Hypnosis has also been a well-documented treatment for various types of acute and chronic pain since its first use in 1821 as a surgical anesthetic (Wolskee, 1987). It is a state of focused awareness or heightened concentration. Relaxation techniques are designed to teach the patient to relax muscles that are causing pain. These can be difficult to learn and the greatest success occurs in patients who accept that muscle tension is the cause of their chronic pain.

The use of neurosurgical procedures for the treatment of chronic pain includes neural blockade. Rybock (1989) describes this as an interruption of a nerve's function by the injection of a local anesthetic agent or other drug. He explains that nerve blocks are of no value in many cases of chronic pain and should be used to answer specific questions resulting from a careful examination of the patients pain problem. It should be used to provide a definitive answer or when there is a discrepancy between a demonstrated pathology and findings. Also, when multiple sources of pain are present, it can help determine the relative contribution of each component. Peripheral nerve blocks are used to diagnose whether the pain is peripheral or central. Once an effective block is confirmed, the report of the effect on the pain by the patient must be carefully interpreted.

#### Summary

Although adoption of MDS in general, is not widespread, benefits of their use are documented. With increasing technology and economic feasibility, computers are used far more in the health care field than ever before. Due to many perspective and treatment approaches to pain, a clearer view of demographic, diagnostic, and treatment protocols used in a typical chronic pain clinic is necessary to evaluate outcomes and conduct further research. The aim of this study is to describe patients in a military chronic pain clinic through the use of a standardized selected minimum data set by collecting data from a sample of consultation records in the chronic pain clinic.



## CHAPTER THREE

### Methodology

A selected minimum data set, based on a review of the literature, was created. It was used to collect data from 57 initial consultation records in a military chronic pain clinic setting. The clientele consisted of active duty military personnel, dependents, and retired military members. The study centered on the initial visit to the chronic pain clinic. No follow-up records are included in this study. Because secondary data were used, informed consent was not required although strict confidentiality was maintained and Institutional Review Board approval was obtained from Malcolm Grow Medical Center.

### Instrumentation

The selected minimum data set shown in Table 1 was based on pain assessment literature. From this selected data set, a data collection instrument was designed for this study (Figure 1). The instrument was precoded, designed for computer processing, and determined to be a valid instrument for collecting a selected minimum data set. Several guidelines were used in developing the selected data set. Kritek (1988) suggests using common practice language to reflect the broadest range of specialties and viewpoints to enhance uniformity and interdisciplinary collaboration. Additionally, she recommended that the fewest number of data elements should be selected and, that they should be restricted to items that meet a consensus. This decreases the creation of an unwieldy data set. Joel (1988) cautions that control is greatest where data are most expansive but the most vulnerable element in the system is the human one. She suggests

**Table 1.****Chronic Pain Clinic Selected Minimum Data Set**

- 
- I. Patient Demographics
    - 1. Name
    - 2. Social security number
    - 3. Age/Birthdate
    - 4. Sex
  
  - II. Patient-Provider Encounter Visit Data
    - 5. Date of encounter
    - 6. Description of pain
      - a. Duration- months/years
      - b. Characteristics
    - 7. Diagnostic tests
    - 8. Medical Diagnosis
    - 9. Treatment
      - a. Medication
      - b. Physical Therapy
      - c. Psychotherapy
      - d. Regional blocks
-

Date of Visit:  (mm/dd/yy)      Tracking #:

Last Name:       First Name:       Sex:       AGE:       Duration: Years-  Months-

Pain Location:

<u>Description</u>	<u>Imaging</u>	<u>Diagnosis</u>
<input type="checkbox"/> aching <input type="checkbox"/> burning <input type="checkbox"/> blurred vision <input type="checkbox"/> clammy <input type="checkbox"/> cold <input type="checkbox"/> chills <input type="checkbox"/> crampy <input type="checkbox"/> dec sensation <input type="checkbox"/> dizziness <input type="checkbox"/> dull <input type="checkbox"/> hyperesthesia <input type="checkbox"/> hyperpathia <input type="checkbox"/> nausea <input type="checkbox"/> numbness	<input type="checkbox"/> Bone Scan <input type="checkbox"/> MRI <input type="checkbox"/> Myelogram <input type="checkbox"/> CT Scan <input type="checkbox"/> X-Ray <input type="checkbox"/> OTHER: <input type="text"/>	<input type="text"/>
<u>Treatment</u>		
<u>Medication</u> <input type="checkbox"/> Benzodiazepines <input type="checkbox"/> Narcotics <input type="checkbox"/> NSAIDS <input type="checkbox"/> Muscle Relaxants <input type="checkbox"/> TC Antidepressants <input type="checkbox"/> Antipsychotics <input type="checkbox"/> OTHER: <input type="text"/>	<u>Physical Therapy</u> <input type="checkbox"/> Brace <input type="checkbox"/> Exercise <input type="checkbox"/> TENS <input type="checkbox"/> Vapocoolant Spray <input type="checkbox"/> OTHER: <input type="text"/>	<u>Psychotherapy</u> <input type="checkbox"/> Counseling <input type="checkbox"/> Biofeedback <input type="checkbox"/> Distraction <input type="checkbox"/> Relaxation Techniques <input type="checkbox"/> Stress Management <input type="checkbox"/> Hypnosis <input type="checkbox"/> OTHER: <input type="text"/>
<u>Regional Blocks</u>		
<input type="checkbox"/> Cervicothoracic Sympathetic <input type="checkbox"/> Facet Block <input type="checkbox"/> Intercostal Nerve block <input type="checkbox"/> Ilioinguinal block <input type="checkbox"/> Lat Fem Cutaneous <input type="checkbox"/> Lumbar Epidural Steroids	<input type="checkbox"/> Occipital Nerve block <input type="checkbox"/> Pudendal block <input type="checkbox"/> Sciatic block <input type="checkbox"/> SI Injection <input type="checkbox"/> Stellate Ganglion block	<input type="checkbox"/> Supraclavicular <input type="checkbox"/> Sympathectomy <input type="checkbox"/> Trigeminal Glycerol Injection <input type="checkbox"/> Trigger Point Injection <input type="checkbox"/> OTHER: <input type="text"/>
<input type="checkbox"/> <u>No Treatment</u>		

Comments

**Figure 1.**

### **Military Chronic Pain Clinic Data Collection Instrument**

keeping in mind that the information for the data set will be supplied by notes prepared by busy caregivers from various levels of education, who may question the value of heavy demands for documentation. The data set used in this study is a selected one which may not meet the needs of every provider or data user. Treatment of chronic pain patients may require more information than what is contained in the selected data set in certain cases. This selected data set could be used as a core of data around which the collection of data begins. It represents an initial attempt to standardize the collection of essential data for the chronic pain clinic.

### Research Plan

A nine element selected minimum data set for a chronic pain clinic was designed from pain literature research as shown in Table 1. A chart review was conducted on 57 charts from the Malcolm Grow Medical Center chronic pain clinic, located in Maryland. They were recorded as the initial consultation visit occurring between 1 January 1995 and 29 February 1996. The selected data elements collected include demographic items and encounter visit data which consists of description of pain, diagnostic tests, medical diagnoses, and treatment provided. Only the first treatment was recorded.

The research was designed as a descriptive analysis. Burns and Grove (1993) state that this design can be used for identifying variables within a phenomenon, defining and then describing them. This leads to interpretation of the findings and provides knowledge for further research. No analysis of relationships between dependent or independent variables is undertaken.

The statistical treatment of the data is focused on analyzing percentage distributions. Through the use of tables and graphs, descriptions of patient demographic information, chronic pain complaints, medical diagnoses, and treatments are discussed.

#### Summary

This chapter explains how a minimum selected data set was created from research of the pain literature. From this, a data collection instrument was designed and applied to collect a retrospective review of the manually written consultation records in a military chronic pain clinic. The lack of availability of complete medical records is a limitation of the study.

## CHAPTER FOUR

### Results

#### Demographics:

The demographic items that characterized the patient were included on the 57 patient consultation records and evaluated. These include surname, first name, social security number, age, and sex. The largest percentage of patients to visit the chronic pain clinic during the 14 month study period were 60-79 years of age, representing 43 percent, followed by 40-59 years, representing 24 percent (Table 2). The distribution of patients by sex during the 14 month period was 35 females, or 61 percent, and 22 males, or 39 percent. Thus, patients over 40 years of age visited the pain clinic twice as often than those younger than 40. Female patients visited the clinic nearly twice as often as men.

#### Location of Pain:

Of 57 medical records analyzed, the most frequent location of pain reported was back, 28 percent, abdominal, 14 percent, and chest, 11 percent (Table 3). Pelvic, neck, and axillary/upper arm pain accounted for less than 15 percent of the complaints. The length of time during which patients suffered from pain before entering this military chronic pain clinic was less than one year, representing 37 percent and one to six years representing 37 percent. Thus, the majority of the clients in the pain clinic suffered from their pain for more than a year before contacting this clinic.

#### Characteristics of Pain:

There were many symptoms or descriptions of pain used by the clients. Three terms were found in nearly half of the records: pain that radiates at 20 percent, sharp pain at 15 percent, and

**Table 2.****Age of Patients by Number and Percent Attending the Military Chronic Pain Clinic**

<i>Age (years)</i>	<i>No. of Patients</i>	<i>Percent</i>
0-19	0	0
20-39	19	33
40-59	14	24
60-79	24	43
>79	0	0
Total	57	100



**Table 3.**

**Location of Pain by Number and Percent for 57 Patients  
Attending the Military Chronic Pain Clinic**

<i><b>Location of Pain</b></i>	<i><b>Number</b></i>	<i><b>Percent</b></i>
Back	17	28
Abdominal	8	14
Chest	7	11
Headache	6	10
Lower Extremity	6	10
Axillary/Upper Arm	4	7
Pelvic	3	5
Facial	2	3
Foot	2	3
Neck	2	3
Hand	2	3
Other	2	3
Total	61*	100

\* Includes multiple locations of pain for a few patients

aching pain at 12 percent (Table 4). Other symptoms such as nausea, decreased sensation, crampy, or blurred vision were found in less than 4 percent of the cases.

#### Imaging Tests:

Imaging tests ordered on patients included X-ray, magnetic resonance imaging (MRI), bone scan, computed-tomography scan (CT scan), and myelogram. Of the 57 patients who visited the clinic, only 25 required an imaging test; X-ray accounting for 68 percent and MRI for 16 percent (Figure 2). Six patients required either an MRI or a bone scan.

#### Medical Diagnoses:

The most frequent medical diagnoses were lower back pain, representing 22 percent, peripheral neuropathy at 10 percent, and postherpetic neuralgia at 9 percent (Table 5). Other diagnoses were recorded for fewer than 10 percent of the patients during the 14 month period.

#### Treatment Modalities:

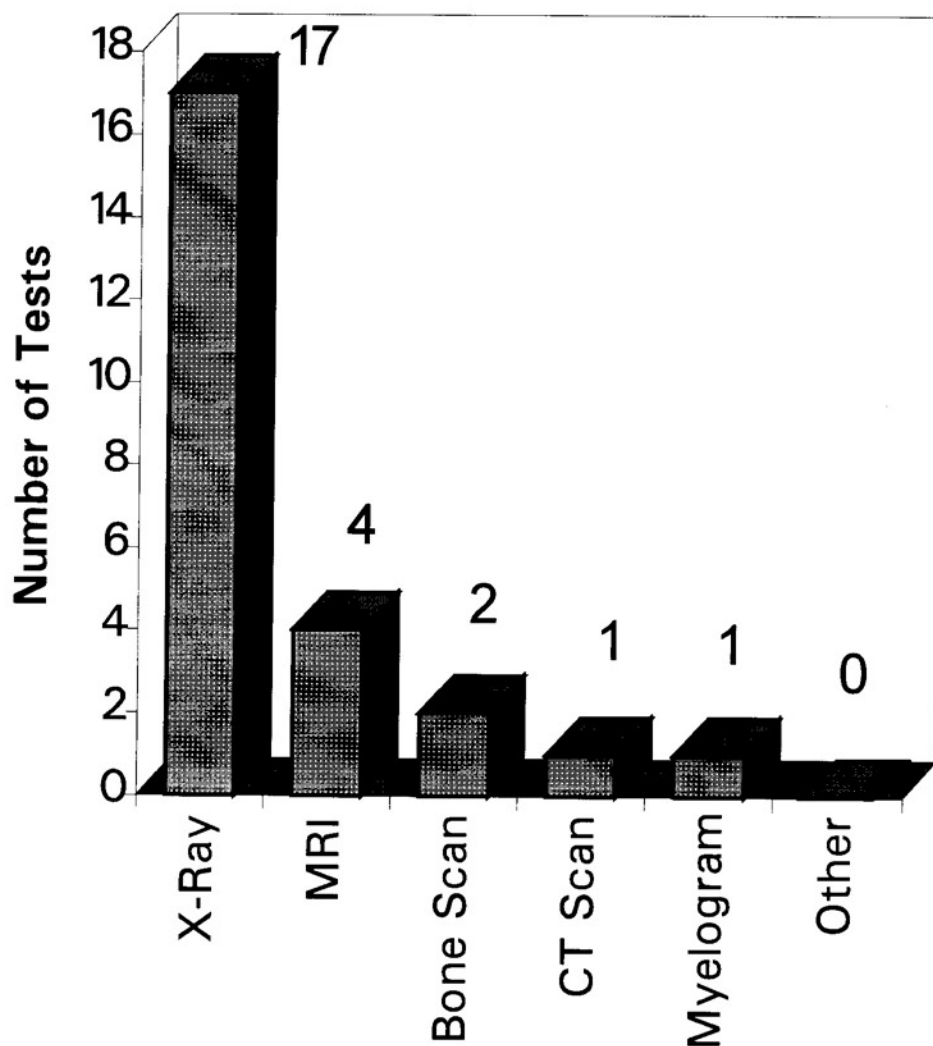
Treatment modalities for the 57 patients included regional blocks, the most common at 54 percent, medication, 21 percent, physical therapy, 12 percent, no treatment, 11 percent, and psychotherapy, 2 percent (Figure 3). Three-fourths of the 57 patients were treated with regional blocks or medication. Psychotherapy was used in only one case and physical therapy was used in seven cases. Of the 31 regional blocks performed, the most frequent were lumbar epidural steroid injections (LES), 26 percent, followed by trigger point injections, 20 percent, and occipital blocks, 16 percent. Only one patient received a facet block (Table 6).

Of the 21 percent of patients who received medication for treatment, 34 percent received tricyclic antidepressants and 25 percent received narcotics. Physical therapy adjuncts

**Table 4.****Characteristics of Pain by Number and Percent for 57 Patients in a Military Chronic Pain Clinic**

<i>Characteristic</i>	<i>Number</i>	<i>Percent</i>
Radiates	29	20
Sharp	22	15
Aching	18	12
Other	18	12
Burning	13	9
Dull	10	7
Numbness	8	5
Tingling	4	3
Cold	3	2
Hyperesthesia	3	2
Photophobia	3	2
Throbbing	3	2
Blurred vision	2	1
Clammy	2	1
Crampy	2	1
Stabbing	2	1
Decreased sense	1	1
Nausea	1	1
Shooting	1	1
Tunnel vision	1	1
Total	146*	100

\* Includes multiple reports of pain

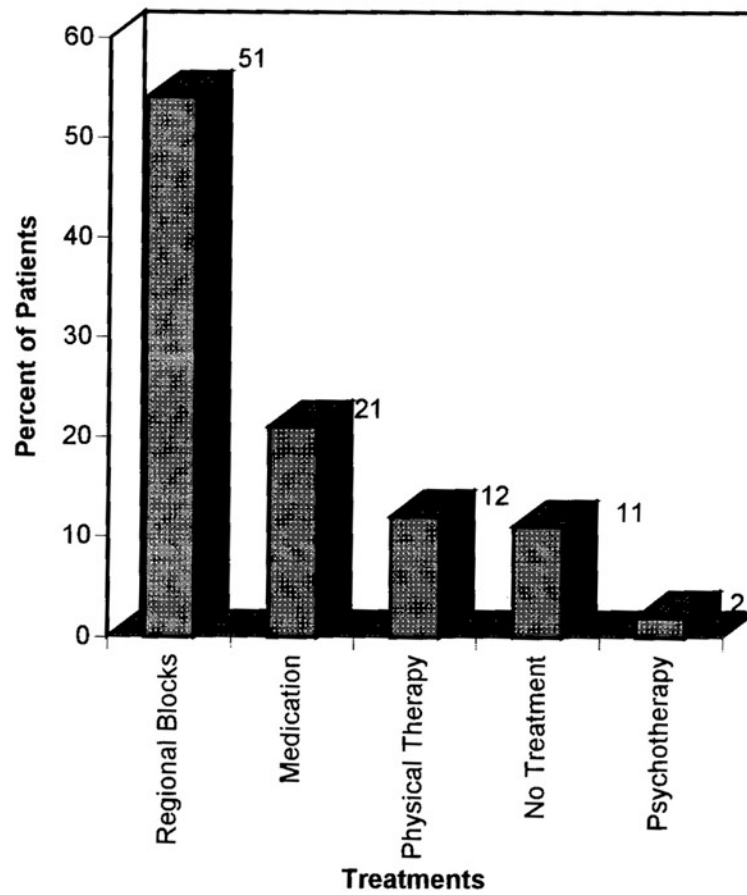


**Figure 2.**

**Number of Imaging Tests Ordered for 57 Patients in the Military Chronic Pain Clinic.**

**Table 5.****Medical Diagnoses by Number and Percent of Patients in the Military Chronic Pain Clinic**

<i>Diagnoses</i>	<i>No. of Patients</i>	<i>Percent</i>
Lower back pain	13	22
Other Pain	11	18
Peripheral Neuropathy	6	10
Postherpetic Neuralgia (PHN)	5	9
Headache	3	5
Occipital Neuralgia	3	5
Shoulder/Hand/Arm pain	3	5
Migraine	2	4
Reflex Sympathetic Dystrophy (RSD)	2	4
Sciatic pain	2	4
Disseminated Varicella	1	2
Myofascial pain	1	2
Pathologic Rib Fracture	1	2
RCM pain	1	2
Rt sided pain	1	2
Sickle Cell Vaso-occlusive Crisis	1	2
Trenchfoot	1	2
Total	57	100



**Figure 3.**

**Initial Treatments by Percent of 57 Patients in the Military Chronic Pain Clinic.**

**Table 6.****Regional Blocks by Number and Percent Performed for Patients in the Military Chronic Pain Clinic**

<b><i>Regional Block</i></b>	<b><i>No. of patients</i></b>	<b><i>Percent</i></b>
Lumbar Epidural Steroids	8	26
Trigger Point Injection	6	20
Occipital	5	16
Sacro-Iliac Injection	4	13
Other	3	10
Intercostal	2	6
Stellate Ganglion	2	6
Facet Block	1	3
Total	31	100



were used in only 12 percent of the total patient population. Exercise and transcutaneous electrical nerve stimulation (TENS) were used in more than three-quarters of the patients.

### Summary

The results, which are presented in the tables and figures of this chapter, display the selected minimum data set for a chronic pain clinic. They also characterize the average military chronic pain patient.

## CHAPTER FIVE

### Discussion

The purpose of a minimum data set (MDS), introduced in 1974, was to improve the quality of medical care and reduce the redundant recording of data by providers. The MDS is concerned with a specific aspect of the health care system and its advantages include the ability to: prepare more legible uniform records, evaluate the treatments of clients, and project trends for planning and management.

Through the application of a selected minimum data set, the initial consultation records of patients of a military chronic pain clinic were analyzed. None of the patient records were computerized. In fact, the records used were difficult to read, contained no uniform pattern of recording the consulting visit data, and were not kept in an ordered filing system. All data for this study were collected for the selected data set after many hours of locating, deciphering, and organizing the records. More meaningful data could have been collected and analyzed in a shorter amount of time had the selected data set tool been incorporated in the consultation records.

In comparing this military chronic pain clinic with those described in the literature, some similarities and differences can be found. All clinics stress the importance of getting a full history and physical examination of the patient before making a medical diagnosis. This military clinic was no exception. All records included a chronic pain history and physical examination completed during the initial consultation visit. Major differences in chronic pain clinics exist between proponents of various approaches to treatment. Many

pain programs are based either on a holistic or somatic model, and some programs borrow ideas from each other.

Clinics that take a holistic approach to chronic pain focus on functional restoration or helping patients come to terms with their discomfort and learning to live with the pain. Patients come to the clinic for eight hours every weekday for three or four weeks and receive counseling and education to help them understand their pain. These programs often shun the use of any pain medication. The Pilling Pain Clinic and the Pain Management Program of Sister Kenny Institute are examples of clinics with a holistic approach (Nettleton, 1993).

More typical clinics are based on the somatic model which uses anesthesia and analgesic interventions. They are commonly staffed by anesthesiologists and use alternative pain control methods such as anesthetizing ganglions temporarily or permanently by injections, inserting catheters into the spine, and using narcotics, acupuncture, and chiropractic techniques. After an initial assessment, a treatment program is planned ranging from basic injections combined with physical therapy, to sophisticated diagnostic and therapeutic procedures to block specific nerves. For example, the Minnesota Pain Center at HealthEast Bethesda Hospital in St. Paul takes the somatic approach toward pain treatment.

The Malcolm Grow chronic pain clinic, used in this study, uses the somatic model. It is staffed by anesthesiologists. The somatic approach, using regional blocks, medication, and physical therapy accounted for 87 percent of treatment modalities. However, the holistic approach, using psychotherapy, accounted for only 2 percent of the treatments.

The most frequent medical diagnosis made in this military chronic pain clinic was lower back pain, representing 28 percent. This finding is consistent with low back pain described as the most common cause of disability for an individual in the working years and one of the most expensive health care problems (Sullivan & Loeser, 1992).

Fifty-four percent of patients received regional blocks and 21 percent of patients received medications. These results are the reverse of those found in The Centre for Pain Relief, Walton Hospital, Liverpool, where in a three month period, 43 percent of their pain clinic patients received medications and only 26 percent received a regional block (Wells & Miles, 1991). Total use of medication and regional blocks were similar in the British hospital and study clinic: 69 percent of the patients in the Centre for Pain Relief compared with 73 percent in this military pain clinic.

It is clear that future study is needed to answer many unanswered questions. They include: 1) What percentage of the chronic pain treatment modalities are most effective? 2) Are regional blocks effective or does pain medication work more effectively for lower back pain? 3) Are somatic treatments more effective than holistic treatments?

Another area of future study should be: What is the role of the Certified Registered Nurse Anesthetist (CRNA) in a military chronic pain clinic and how well are they being utilized?

And finally, this study should be replicated using a larger sample from a larger military chronic pain clinic. Such a study would produce more information and could validate the selected minimum data set developed for this study. A foundation of knowledge has been laid by this study and several important questions have been determined for further research.

### Summary

A military chronic pain clinic was researched through use of a selected minimum data set. Information on demographics, chronic pain, and treatment were collected and analyzed and presented in tabular form. The practices of this small chronic pain clinic has been described and important questions have been raised for further research. The value of the use of a selected minimum data set for chronic pain in future research was stressed in the hope that it will gain more widespread acceptance.

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